Washington Park Arboretum

BULLETIN

Published by the Arboretum Foundation

Winter 2007

$5

The Washington Park Arboretum Bulletin is a benefit of Arboretum Foundation membership. For information on membership or advertising opportunities, contact the Arboretum Foundation at 206-325-4510 or gvc@arboretumfoundation.org.

Washington Park Arboretum

The Arboretum is a 230-acre dynamic collection of trees, displaying internationally renowned collections of oaks, conifers, camellias, Japanese maples, hollies and a profusion of woody plants from the Pacific Northwest and around the world. Aesthetic enjoyment gracefully co-exists with science in this spectacular urban green space on the shores of Lake Washington. Visitors come to learn, explore, relax or reflect in Seattle's largest public garden.

The Washington Park Arboretum is managed cooperatively by the University of Washington and Seattle Parks and Recreation; the Arboretum Foundation is its major support organization.

Graham Visitors Center

Open 10 AM—4 PM daily;
holidays, NOON—4 PM.
Closed Thanksgiving and the Friday after,
Christmas and New Year's Day.
The Arboretum is accessible by Metro Transit buses #11, #43 and #48. For more information: www.transit.metrokc.gov

Arboretum Foundation

The Arboretum Foundation is a nonprofit organization established in 1935 to ensure stewardship for the Washington Park Arboretum and to provide horticultural leadership for the region. The Foundation provides funding, volunteer services, membership programs and public information in support of the Arboretum, its plant collections and programs. Volunteers operate the gift shop, conduct major fund-raising events, and further their gardening knowledge through study groups and hands-on work in the greenhouse or on the grounds.

2300 Arboretum Drive East, Seattle, WA 98112
206-325-4510 voice / 206-325-8893 fax
gvc@arboretumfoundation.org
www.arboretumfoundation.org
Office hours: 8:30 AM—4:30 PM weekdays
Gift shop hours: 10 AM—4 PM daily

Officers of the Arboretum Foundation
Board of Directors

Deborah Andrews, Executive Director

John Johnston, President
Susan Black, Vice President
Fred Isaac, Vice President
Mary Ann Odegaard, Vice President
Judy Phillips, Vice President
Tim Diller, Treasurer
Della Balick, Secretary
Neal Lessenger, Immediate Past President

University of Washington

The University of Washington manages the Arboretum's collections, horticultural programs, facilities and education programs through the University of Washington Botanic Gardens. It owns some of the land and buildings.

206-543-8800 voice / 206-616-2871 fax
Office hours: 8 AM—5 PM weekdays
www.uwbotanicgardens.org

David J. Mabberley, M.A. (Oxon.), Ph. D. (Cantab.), Director, University of Washington Botanic Gardens

Seattle Parks and Recreation

The City of Seattle owns most of the Arboretum's land and buildings. Seattle Parks and Recreation is responsible for park functions throughout the Arboretum and manages and operates the Japanese Garden.

206-684-4556 voice / 206-684-4304 fax
Ken Bounds, Superintendent

Washington Park Arboretum Bulletin

Lee Cuninggim Neff, Editor
Cynthia E. Duryee, Copy Editor
Constance Bollen, Graphic Design
Joy Spurr, Photography (unless otherwise noted)

Editorial Board

Cynthia E. Duryee, Writer/Editor
Val Easton, Writer
Polly Hankin, Edmonds Community College
Daniel J. Hinkley, Author, Lecturer, Horticultural Consultant
Steven R. Lorton, Former Northwest Bureau Chief, Sunset Magazine
Ciscoe Morris, Horticulturist
Myrna Ougland, Two Cats Nursery
Pam Perry, Parsons Public Relations
Christina Pfeiffer, Horticultural Consultant
Richie Steffen, Coordinator of Horticulture, Elisabeth C. Miller Botanical Garden
David Streatfield, University of Washington Dept. of Landscape Architecture
Brian R. Thompson, Curator of Horticultural Literature, University of Washington Botanic Gardens
Cass Turnbull, Plant Amnesty Founder
Martha Wingate, Writer

Botanical Editors

Randall Hitchin, Registrar & Collections Manager, University of Washington Botanic Gardens
Martha Wingate

Winter 2007 Volume 68. Issue 4.

© 2006 The Arboretum Foundation.

ISSN 1046-8749.

Contents

2 See You at the Plant Sales!—*Deborah Andrews*

3 A Great Idea! The Northwest Flower & Garden Show—*Marty Wingate*

6 Front-Porch Friendly—*Brenda Chrystie, Debra Hemingway & Sarah Luczyk*

9 A Tale of Three Great Plants (and Seven Plant Collectors)—*Carolyn Jones*

16 An Improbable Jewel—*Daniel J. Hinkley*

20 The Healing Power of Plants—*Timothy Walker*

25 A Decade of Deb—*Steve Lorton*

27 How Could an Arboretum Not Have an Arborist?—*Lou Stubecki*

30 **In a Garden Library:** New—for Daphne Lovers—*Jerry Flintoff*

ABOVE: A snowy day on Azalea Way, with dark cherry tree bark iced in white.

ON THE COVER: The sprightly, shimmering seed heads of *Clematis repens* were photographed by Dan Hinkley while hiking "The Pilgrim's Path" on Emei Shan, where he collected the seed of this *Clematis* in 1996. His collection marked the rediscovery of a species that had earlier been described and then lost over the years. The shiny, deep green foliage of *C. repens* is visible in this photograph. From May to October this *Clematis* species scrambles over rocks and shrubs, bearing bright yellow, pendant flowers held on long, graceful stems.

See You at the Plant Sales!

Dear Arboretum Friends,

What a wonderful place Washington Park Arboretum is! There are magnificent trees, fabulous shrubs, soaring eagles and herons, and the owl that lives at the south end of the park. But what really makes this place so wonderful? The volunteers, the Foundation members, the Board, the visiting grandparents from out of town and the many school children from all around the region. The people make this place unforgettable!

CHRIS LUCZYK

Deb Andrews helps tidy an enticing array of plants at the Arboretum Foundation's Spring Plant Sale, FlorAbundance, 2006.

And so it was only after considerable thought that I recently tendered my resignation as executive director of the Arboretum Foundation. This was not an easy choice, because of my love for the Arboretum and the deep friendships formed during the past 16 years, first as a volunteer and then as a staff member for the last 10 of those years.

My relationship with the Arboretum began with membership in a unit—well, two units, actually. But I think I really got hooked after I worked my first spring plant sale. It was then held then in a University of Washington parking lot. Every plant, and everything else for the sale, was transported to the parking lot—quite an amazing feat for the volunteers. "What great people," I remember thinking. "This is where I want to spend my time."

I have been privileged to be associated with incredibly dedicated staff, volunteers and Board members—all putting their hearts and souls into what they do on behalf of the Arboretum. And I have always been impressed by the hardworking staff and crew of both Seattle Parks and Recreation and the University of Washington. It is because of the devotion shown, by volunteers and staff, that I know the Arboretum is in very capable and caring hands.

Directing the Arboretum Foundation has been a wonderful and challenging job, and one I will surely miss. I appreciate all of your support, friendship and hard work over the years. Best wishes to one and all. See you at the plant sales!

Deborah Andrews

Deborah Andrews, Executive Director,
Arboretum Foundation

JOHN GRANEN

A Great Idea!

THE NORTHWEST FLOWER & GARDEN SHOW

By Marty Wingate

Even during the darkest season in the Pacific Northwest, gardeners have cause to rejoice, because each February, it's time for the Northwest Flower & Garden Show. This event has become so much a part of our gardening lives that it is difficult to remember when it didn't exist, but it began only 20 years ago when its founder, Duane Kelly, had a great idea.

Duane and Alice Kelly visited the Philadelphia and New England flower shows in 1987. Back in their hotel room, Duane told

This stunning shot shows the Arboretum Foundation's very first display garden, created for the Northwest Flower & Garden Show in 1989.

Alice that he thought they could put on a flower show in Seattle. It is a tribute to their relationship that Alice didn't disagree. Duane was a businessman and had started other successful ventures; she knew that his great idea wasn't just a fanciful dream, but a notion that could become reality.

Using models, such as the shows in Philadelphia and New England (with a combined history of almost 300 years) and the Royal Horticultural Society's Chelsea Flower Show (which is more than 140 years old), the Northwest Flower & Garden Show debuted in 1989 and quickly became one of the premier gardening events in the country—two countries, if you, rightly, include Canada. Now, it's a tradition; then, it was a new, exciting and risky enterprise set in Seattle's newest venue for events: the Washington State Convention & Trade Center.

A Different Sort of Show

From the beginning, the Northwest show was different. We may not have 150 years of gardening behind us, but in 1989 the Northwest was a hotbed of horticulture (as it still is), and an exciting combination of inspiration, education and opportunity was all that was needed to make the show a hit. Each element of the show—gardens, seminars and commercial booths—continues to draw visitors into an atmosphere where the dark winter is forgotten.

The gardens—more than 20 of them each year—greet people first. They showcase plants and gardening styles, both fanciful and fabulous. Each garden has its own set of designers and creators, and it was clear in the show's very first year that a whole convention center full of such talented people would need some coordinating.

"It's the most fun job I ever had," says Mary Booth, who served as garden coordinator for six years. Booth, a landscape architect who helped create the Arboretum Foundation's display garden the first year of the show, moved to Hansville with her husband and decided that she wanted to stay connected to the flower show, so she volunteered her services to Duane Kelly.

"He came back to me a couple of weeks later," she recounts, "and said, 'How about being in charge of the garden creators?'" It wasn't a technical position, but rather one of keeping tabs on designs, designers and how the gardens all went together.

With Different Sorts of Stories

Sounds easy enough, but snags—later referred to as "great stories"—invariably occurred. Such was the year when a creator, whose garden was slated for a large, prominent location, dropped out only a few weeks before the show. "Duane asked me if I would put something together. He got Architectural Glass to put up a greenhouse and a contractor to install pavers. Then Wells Medina Nursery said we could borrow anything we wanted." The garden came together at the last minute with a great deal of help from many people, including Booth's 80-year-old mother, who was up 'til late at night putting in plants with everyone else.

Often, it isn't just placing the last plant that is the problem. Once, the challenge was chasing down a pair of white peacocks that got loose in the gardens just before the Arboretum Foundation's preview party began. Then there was the time that the huge waterfall created for David Ohashi's garden leaked, and Kelly got a call in the middle of the night saying that the Convention Center parking garage was flooding.

It's no wonder a glitch or two occurs, as the garden creators have only three-and-a-half days to move into position mountains of compost, sawdust and large rocks, in addition to plants and hardscape. By noon on Tuesday, everyone must be off the floor so that judging can begin. This is the moment when Kelly strongly recommends that the garden creators take the afternoon off—take a nap, take a shower, get ready for the preview party.

PHOTOS BY JOHN GRANEN

There's nothing else they can do.

Judging causes anxiety, delight and, occasionally, puzzlement. The main awards are presented by three judges and—beginning with the 2000 show—are based on the Royal Horticultural Society's method of garden evaluation: a garden is judged against its own written intent rather than against other gardens. On Tuesday afternoon, with the floor quiet and everything finished, Alice Kelly accompanies the main judges on their journey through the gardens as they award gold, silver, bronze or crystal medals. Usually, the judges are well known to gardeners who read U.S. and international magazines and books, and often they are the subjects of a few good stories themselves.

Such was the case when Helen Dillon, Irish garden designer and author, judged in 1998 and ran up against an irate designer who didn't agree with the final outcome of the awards. Instead of taking Duane Kelly's advice about resting, this designer spent the afternoon drinking. When he learned of the judges' decision—a decision he didn't agree with—he took his alcoholic anger out on Dillon, which was a misguided decision, to say the least. Normally a gracious person—"She has a feisty Irish streak," Kelly says—she told the garden creator to shut up, which he did. He later wrote her an apology.

Important Principles of Judging

Not all judging prompts such emotional encounters, but all judging does encourage good display design, which includes the idea that there should be no shortcuts in elements that are integral to a garden—a principle that was demonstrated by the late Rosemary Verey,

BACKGROUND: The first step in display garden setup involves operating huge equipment and shoveling mountains of sawdust. **INSET:** Judges for the 1990 Northwest Flower & Garden Show were the late Rosemary Verey, Isabelle Green and James Van Sweden.

Front-Porch Friendly

By Brenda Chrystie, Debra Hemingway and Sarah Luczyk

Inviting neighbors into our lives—however briefly—with a friendly smile or chat has long been at the root of vibrant communities. Our first encounters almost always begin outside our homes—in front—setting the stage for spontaneous moments or hours of shared news and laughter. Recognizing the importance of neighborliness, the Arboretum Foundation's display garden, Front-Porch Friendly, is a reminder of how an inviting front entry garden not only beautifies neighborhoods but also keeps neighbors connected.

Illustration by Octavia Chambliss

Washington Park Arboretum, integrated into the neighborhoods of Montlake, Broadmoor and Madison Park, with woodlands, gardens, walking trails and wetlands, welcomes visitors from throughout the Northwest and far beyond to explore and enjoy its beauty.

Each year the Arboretum Foundation proudly presents its display garden at the Northwest Flower & Garden Show. Produced with support from the staff of the University of Washington Botanic Gardens and Seattle Parks and Recreation, the Arboretum's joint-managing agencies, the display garden presents to garden show visitors the best in design and plant materials.

Designed by Octavia Chambliss of Octavia Chambliss Garden Design, Front-Porch Friendly will beckon you to enjoy the soft, winding path leading to the front porch, the casual chairs and swing. The combination of plants blends leaf color and varied texture for year-round interest, while remaining low to the ground so that visitors can easily see the porch and two-part, welcoming Dutch door. Whimsical touches in the arbor and birdbath, and bolts of color in beautiful containers, inspire those on the street to create their own special gardens. Rain chains create soft music even in the bleakest weather. Conversations naturally begin, friendships easily form and neighbors forge a lasting community.

Arbor Eden

The night before the Show opens to the public, the Foundation's preview gala—Arbor Eden—delights patrons, donors and volunteers with a unique opportunity to experience the third-largest flower and garden show in the United States at its prime. You are invited to be among the first to see the dazzling gardens of the annual Northwest Flower & Garden Show, support Washington Park Arboretum and enjoy a delightful silent auction of garden, home and travel treasures as well as delicious food and wines.

Arbor Eden tickets are available for $100 to $500 each and can be purchased at www.arboretumfoundation.org or by calling the Foundation office at 206-325-4510. If you would like to volunteer to help build this year's display garden, call the Foundation office and ask for Volunteer Coordinator Sarah Luczyk.

Through membership, volunteerism and education, the Arboretum Foundation involves and serves the community in providing care for one of the region's most-visited and best-loved outdoor destinations. And, through its annual display garden at the Northwest Flower & Garden Show, the Arboretum Foundation demonstrates how you can recreate the everyday beauty of the Arboretum to enjoy with your neighbors in your own garden.

Brenda Chrystie is annual giving and events manager for the Arboretum Foundation. **Debra Hemingway** is development coordinator, and **Sarah Luczyk** is the Arboretum Foundation's volunteer coordinator. Please call her at 206-325-4510!

JOHN GRANEN

DAVID MCDONALD

who first judged in 1990. When Kelly invited her to judge, his preconceived idea of Verey as a pretentious British garden writer thoroughly burst.

On their rounds, the judges came upon a garden with a worm bin. "Rosemary said if it wasn't real, they should be marked down," Kelly remembers. So what else was there to do? Verey walked over, lifted the lid, stuck her arm into the earthy-smelling matter and drew up a handful of compost and worms. "This garden," she said, "deserves high marks."

High marks were always given to Rosemary Verey and other European judges, and the appeal of international involvement gives the show increased prestige. Often, one judge generously suggests other potential judges, such as two of the judges for the upcoming show: 1997 judge Nigel Colburn recommended Sibylle Kreutzberger and Pamela Schwerdt, longtime gardeners at Sissinghurst Castle. "It's a small world," Kelly says, "and you end up knowing everyone."

An Extraordinary Seminar Series

Judges not only decide awards, they participate in the seminar series, another vital component of the show. "When I started," Kelly says, "I saw the show as a three-legged stool: the gardens, the seminars and the booths." The Northwest show far exceeds the educational opportunities at other shows, and Kelly is rightfully proud of the seminars. "Here's something I can brag about—at the time, the Philadelphia show had about five seminars."

A daily program of free lectures, staged in two or three rooms, caters to everyone's gardening interest, whether that might be

ABOVE LEFT: In 1990, the Northwest Flower & Garden Show's second year, visitors were greeted by an unusual February snowstorm. **ABOVE RIGHT:** British floral designer Jane Packer demonstrates flower-arranging technique at a Northwest Flower & Garden Show seminar in 1991.

designing full-blown English perennial borders, growing apples or composting. Dave Stockdale ran the seminar series from 1990-1999, after its inauguration by John Wott, and believes that the seminars offer the complementary "how" to the show gardens' "wow."

The creation of the show gardens requires quick work and fast thinking, but the seminars demand the same pace for each lecture, in each room, every day of the show. Anything might go awry—it could be temperamental technical equipment, a line that clogs the hallway or a blown bulb in the slide projector.

Over the years, many Northwest writers and garden experts have come into their own as speakers in the seminar series, and not all were as popular at the beginning as they are today. Dan Hinkley has spoken at the show every year, but he still remembers the first year well, when he had five people in the audience—and one of them was his professor from the University of Washington.

Commercial booths, as well as seminars, give show attendees a change from viewing the gardens. The booths offer a tantalizing array of cutting-edge plants, great tools, and almost anything you could want to decorate a garden. But even if the only physical things visitors walk out with are seed packets or a new pair of gloves, their heads and hearts are full of ideas about gardening in the Northwest.

The Bigger Picture

"This show is a reflection of the whole garden community," Kelly says, and examples of that gardening breadth abound. Every year, Don Marshall, who heads the environmental horticulture program at Lake Washington Technical College, arranges for his students to help build gardens and work in commercial booths. So many of his students have remained in the industry that, now, each show seems like one large class reunion.

It's also a reflection of a family business. Alice and Duane Kelly have spent the last 20 years planning and then putting on the show. Many of those years, Celice Eldred, Alice's daughter (Duane's stepdaughter), worked the show in a variety of positions, including booking and coordinating the commercial booths. And Cyle Eldred, Alice's son (Duane's stepson) has now joined the staff as a full-time show manager, after years of working short-term jobs during the show.

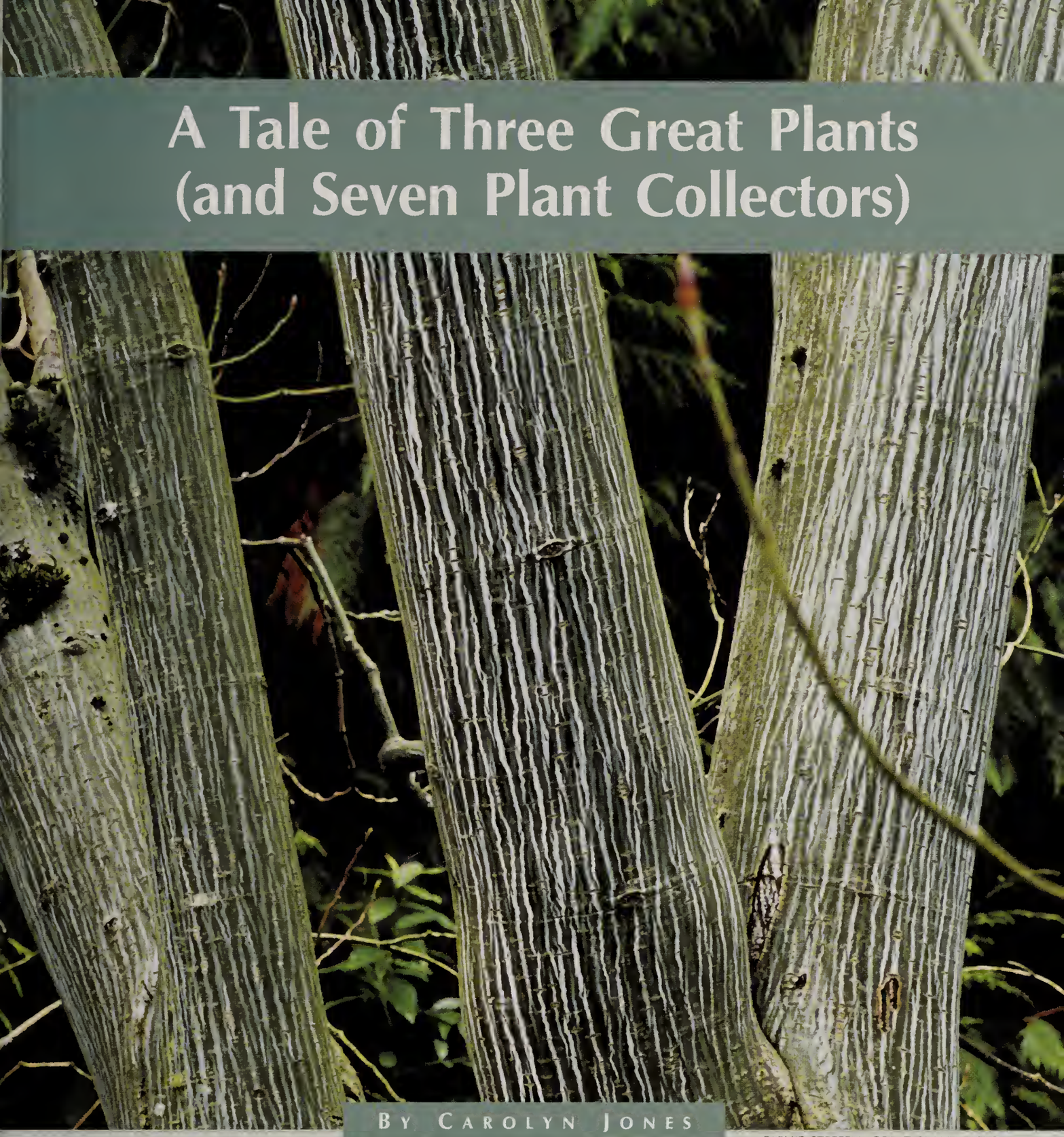
"If I was brilliant—or lucky—at anything, it was catching a wave at the right time," Kelly says. But after peak attendance in 2000, the huge swell of baby boomers had finished creating their gardens, and attendance slacked off. This lag in gardening frenzy has been felt not just by special events, but also by garden book publishers, growers and nurseries. "We've had to adjust to market realities," Kelly says, "just as everyone else has, and we're learning how to attract younger people to gardening. A cornerstone of this adaptation is a recently completed overhaul of the show's Web site, www.gardenshow.com."

New show elements include offering seminars that focus on a wider range of gardening skills, as well as seminars designed for beginning gardeners, new families, and condo and apartment dwellers. The goal: to make gardening more accessible to more people.

But some constants are welcome. The Arboretum Foundation's preview party has been held every year, the night before the show opens. This fundraiser gives the gardening community the perfect chance to admire the gardens—early and without crowds—and offers gardening enthusiasts a great opportunity to see and to be seen. ~

Marty Wingate knows the Northwest Flower & Garden Show inside and out: In years past, she worked in the seminar rooms and as ticket manager; in recent years, she has been a speaker. Her book on the Bellevue Botanical Garden will be published in June 2007.

A Tale of Three Great Plants (and Seven Plant Collectors)



By Carolyn Jones

RICHIE STEFFEN, GREAT PLANT PICKS

While researching fact sheets for the 2006 Great Plant Picks, I noticed that three had strong Washington Park Arboretum connections. Delving into their stories, I discovered that, as notable as the plants are, the stories of the people for whom they are named are just as memorable. In fact, we learn much about the history of horticulture and the Arboretum when we learn about Brian Mulligan, Joe Witt and Arthur Menzies and the plants that bear their names.

Named by Dan Hinkley for long-time Arboretum curator Joe Witt, *Acer tegmentosum* 'Joe Witt' has strikingly striped bark and leaves which turn a buttery yellow in fall. In the Arboretum, it may be viewed in the peony bed, adjacent to Arboretum Drive East, at grid coordinates 17-4E.

Mahonia x *media* 'Arthur Menzies': The Little Hybrid That Could

This handsome *Mahonia* clone started out life in the home garden of Arthur Menzies, supervisor of plant accessions at Strybing Arboretum in San Francisco. It was among a batch of seedlings of his frost-tender *Mahonia lomariifolia*—seedlings sent to Washington Park Arboretum in late September 1961. Before long it was noted that one plant differed considerably from its siblings. The shape of its leaves suggested that the male parent might have been *M. bealei*, which also grew in Menzies's garden. In December 1964, the temperature at the Arboretum dropped to 11 degrees Fahrenheit, continuing that low for several days. While its sister seedlings turned to "pulp," to quote Arboretum Curator Joe Witt, this seedling survived.

It first bloomed in the winter of 1966-1967, and Witt's examination of the 10-inch long spikes of yellow flowers reinforced his guess as to its male parent. Since Menzies had both species in his home garden, hybridization was possible. Witt named this bold, winter-interest plant for its patron, and it has stood the test of time, earning it a Great Plant Picks award for performance in the coastal Pacific Northwest.

. . . And Its Namesake

What do we know of Arthur Menzies, the man?

California born, Arthur Menzies shared his surname with the famous—but unrelated—Archibald Menzies (1754—1842), the surgeon-naturalist who accompanied Captain George Vancouver on the voyage of the Discovery in 1790. Archibald Menzies introduced many of the Northwest's native plants to Britain, and many—including *Pseudotsuga menziesii, Arbutus menziesii* and the genus *Menziesia* (now included in the genus *Rhododendron*)—were named for this genial, hardworking and accomplished man.

Less well known are hundreds of other Scottish horticulturists and botanists named Menzies. In the 1700s, nearly all family members near Archibald Menzies's birthplace were either gardeners or botanists, including seven of the local castle's gardening staff. Gardening seems to be "in the blood" for this family!

Fast-forward to Southern California two centuries later. While not directly descended from Archibald Menzies, Arthur Menzies shared his curiosity and love of plants. In an article written in the *California Horticultural Journal*, Barbara Menzies wrote of her late husband, "From the time he was a very small boy, Art was interested in plants. He had his own lath house in 1929 at age thirteen, and then a greenhouse in 1931, both of which he built himself." The war years found this sensitive, orderly man in the U.S. Army. Sadly, he spent three-and-a-half years in a Japanese prison camp. This experience left permanent physical (due to the stress of coal mining) and emotional scars. Barbara Menzies noted, "He once read that the life expectancy of a prisoner of war was shortened by fifteen years, and he thoroughly believed this to be so." Arthur Menzies died in 1973, at age 57.

From 1947 until his death, Menzies worked in horticulture, first as a gardener for the San Francisco Recreation and Park Department, then for noted plantsman Victor Reiter, then back to the Park Department and, eventually, to Strybing Arboretum. Of him it was said, "He couldn't be topped on the West Coast for his knowledge of plants and horticulture."

While life wasn't always easy for this remarkable plantsman, his widow explained that he was happiest when in the mountains, hunting for California native plants to study. She concluded, "Arthur Menzies was first, last and always a great, great plantsman. In any endeavor he might undertake he was always scrupulously anxious to do his best. He was a master of his own realm and the horticultural world is poorer for the loss of him."

Happily, *Mahonia* x *media* 'Arthur Menzies' was named for him in 1967, while he was still

able to enjoy the recognition from his colleague Joe Witt.

Acer tegmentosum 'Joe Witt'—A Particularly Good Form

Another 2006 Great Plant Pick for winter interest is a very well-striped selection of Manchurian snakebark maple that was named by Daniel Hinkley. This particular clone arrived at the Arboretum in February 1949 as scions sent for grafting from Boston's Arnold Arboretum. It came to the Arnold Arboretum in 1925 from Moscow. Two trees resulted from grafting these scions. One of those died, but in 1953 the second was planted overlooking Azalea Way. This tree was propagated again, and two more specimens were added to the Arboretum's collection, both planted on the west side of Arboretum Drive East.

Of this tree, Hinkley writes, "It was during the first winter that I lived at the Arboretum that I noticed this particular tree, right along Arboretum Drive. It has a ghostly appearance at dusk and dawn, especially if the bark is wet from rain. It was not until after I returned from my first trip to Korea in 1993 that I realized how particularly good this form was in comparison to those in the wild. I thusly named it." In the 2001 Heronswood catalogue, he noted it is "still my favorite of the maples after all these years... With whitest of white stems and broad, papery leaves emerging very early in spring [and] turning in autumn to buttery yellow tones."

. . . And Its Namesake

And what do we know about Joe?

Joe Witt was a Pacific Northwesterner through and through. Born in Sprague, Spokane County, Washington, in 1920, he received B.S. and M.S. degrees from Washington State University. Like most men of his generation, he fought in WWII. Witt arrived at Washington Park Arboretum in 1948, having been given the titles of botanical recorder, assistant director and curator of plant collections. For more than three decades, Witt helped to shape the Arboretum's collections and the institution's role in the Pacific Northwest and beyond. In 1982, he was promoted to research professor at the Center for Urban Horticulture (CUH, now part of the University of Washington Botanic Gardens). After a long illness, he died in May 1984 at the age of 63.

The numerous obituaries that followed his passing record his character and accomplishments. Wrote Harold Tukey, then CUH director, "Witt, a nationally known expert on Northwest plants, is credited with preserving the Arboretum during the financial and administrative crises of the 1970s." Jan Pirzio-Biroli, a former editor of the *Bulletin*, noted, "He was greatly loved by a large number of people to whom he gave unlimited time as a teacher and as a plantsman. He loved to teach and he was able to impart his love of plants to people."

Particularly touching is "A Letter to Joe Witt" written by his long-time friend and colleague George Fahnestock, dated May 31, 1985, and published in the Fall 1985 *Bulletin*. In 1946 Fahnestock was an assistant ranger in Coeur d'Alene National Forest, with his new wife Jeanne. He writes, "The first favor you ever did for me was to show up for summer work as a fire lookout. . . You also brought an extra dividend—your wife, Jean. . . In the absence of a congenial soul of the same sex, [my wife, Jeanne] might have gotten up the courage to go back over 'that road,' for keeps." These two families, with three and five children respectively, became friends for life. Eventually, Witt "hornswoggled" Fahnestock into volunteering at the Arboretum with him—a true test of friendship.

Rosa mulliganii—A Rose of Particular Interest

This rose's story takes us to another Scottish plant collector: George Forrest. Forrest was born in Falkirk, Scotland, in 1873, and

RAY FORSTER, GREAT PLANT PICKS

as a young man preferred to wander over the local hills and watch birds, flowers, fish and butterflies. After a stint with relatives in Australia, young Forrest felt the lure of adventure and open spaces. He was "engaged by Mr. Bulley, of the firm of Messrs. Bees, Ltd., Liverpool, in 1904, to explore the high plateaux and mountain ranges of northwest Yunnan and southwest Tibet, for the purpose of collecting seeds of new and rare alpines." He paid seven visits to this region, organizing local porters and gaining a good grasp of the local dialect. His November 1930 trip was his "final run" and brought his number of seed collections to 31,015!

"As he amassed his collection, he was reluctantly forced to the conclusion that only in the autumn of his life, when collecting was no longer possible, would he be able to devote time to their identification, and so, in a final survey, bring his labours to a fitting conclusion. This was, in fact, his expressed opinion, but—it was not to be."

Sadly, Forrest died suddenly in January 1932, two months before his 58th birthday. Reports indicate that he called out to his field

---

An unusually hardy *Mahonia*, the winter-blooming *M.* x *media* 'Arthur Menzies' is a cross between *M. lomariifolia* and *M. bealei*.
It may be seen in the Arboretum at grid coordinates 14-7E, 33-1E and 35-2E.

RICHIE STEFFEN, GREAT PLANT PICKS

staff, but by the time they got to his side, he was unconscious. Staff members buried him in the mountains of China, where he had worked for almost three decades, and marked his grave with a wreath of white roses.

Knowing this story, it is not surprising that some of the plants Forrest collected were not properly named at the time. One of these was a rose that was growing at the Royal Horticultural Society's (RHS) Garden at Wisley, England. This rose was of particular interest to Brian Mulligan, the Garden's assistant director. As it did not match any species that Mulligan knew, he sent material from it to G. A. Boulenger, a Belgian botanist specializing in roses. Boulenger—who had written in three parts, between 1933 and 1936, *Revision des Roses d'Asie* in the *Bulletin: Jardin Botanique de l'Etat Bruxelles*—was well qualified to comment on this rose sent by Mulligan. Indeed, this was a new species, which Boulenger published (in the same *Bulletin* in 1937) and named for the sharp-eyed Mulligan. The original species description (available at the Elisabeth C. Miller Library in the vertical file on Brian Mulligan) spelled the name *Rosa*

A vigorous rose, which can grow 40 to 60 feet if trained into a tall evergreen, *Rosa mulliganii* thrives in the maritime climate of the Pacific Northwest. This drought-tolerant rose produces large, fragrant clusters of small white flowers in early summer. It may be seen in the Arboretum at grid coordinates 8-6E, 24-4E and 25-4E.

mulligani. The current, correct spelling of the specific epithet is *mulliganii*.

. . . And Its Namesake

Mulligan, the Man

Mulligan is, of course, known to all concerned with Washington Park Arboretum, for he became part of the fiber of the organization. Blessed with long life, Mulligan spent over 50 years working at the Arboretum—26 of these as its salaried director and 24 as a volunteer, when times were tough.

A quick summary of his life, for the record, completes this tale. He was born in Northern Ireland, northeast of Belfast, in 1907. He rose quickly through the horticultural ranks in Britain, obtaining a horticultural diploma from the RHS in 1933, and in 1935 he became assistant to the director at Wisley. WWII saw him balancing military duties and assisting with national vegetable-growing schemes. Recruited from Wisley to run Washington Park Arboretum, the Mulligans arrived in Seattle in late 1946. He was hired as superintendent but within five months was promoted to director. He officially retired in 1972. His obituary in University Week points to his accomplishments. "He published more than 150 horticultural articles in the Washington Park Arboretum Bulletin, a checklist of cultivated maples (1958), a catalog called "Woody Plants in the University of Washington Arboretum" (1977) and he helped revise Grant and Grant's classic work "Trees and Shrubs for Pacific Northwest Gardens" (1980). His many seed-collecting expeditions throughout the world enriched the collections of the Arboretum as well as the lives of his plant-hunting companions. For his contributions to plant science, Mulligan received many awards. . ."

Brian Mulligan, Joe Witt and Arthur Menzies—all made significant contributions to American horticulture. The plants named for them are important in the history of the

Pacific Office Automation

thanks the many dedicated

employees and volunteers

whose hard work makes it

possible for all of us to

enjoy the Arboretum.

PACIFIC OFFICE AUTOMATION
— PROBLEM SOLVED —
www.Pacificoffice.com

The 2007
Northwest Flower & Garden Show

Preview Gala

Tuesday,
February 13,
5–9 PM

- Acres of luminous gardens
- Silent auction of earthly delights
- Delectable Northwest cuisine

Tickets:
www.arboretumfoundation.org
or 206.325.4510

Presented by the Arboretum Foundation to Benefit Washington Park Arboretum

See "Front-Porch Friendly," the Arboretum display garden at the Northwest Flower & Garden Show

Arboretum and are good selections for maritime Northwest gardens. To learn more about these plants, visit the Great Plant Picks Web site, and then take a stroll through the Arboretum itself. ~

Carolyn Jones is the director/curator of the Elisabeth Carey Miller Botanical Garden, the home of the Great Plant Picks program. For further information, visit greatplantpicks.org.

Sources

My thanks to Daniel Hinkley and to Beth Bayley and Kyle Port (Arnold Arboretum of Harvard University), Randall Hitchin (University of Washington Botanic Gardens or UWBG), Brian Thompson (Elisabeth C. Miller Library, UWBG), Barbara Pitschel (Helen Crocker Russell Library of Horticulture, San Francisco) and Quentin Cronk (University of British Columbia Botanical Garden) for help with research.

References

Fahnestock, George R. "A Letter to Joe Witt." University of Washington Arboretum Bulletin, Fall 1985, 48:3, pp. 14-15.

Hinkley, Daniel. Heronswood Nursery 2001 (catalog), page 41.

Macdonald, Sally. "Joseph Witt, plant curator at UW Arboretum, dies at 63." Seattle Times, May 9, 1984.

Menzies, Barbara. "Arthur L. Menzies 1916–1973." California Horticultural Journal. 36:2, pp. 54-62. San Francisco: 1975.

Mulligan, Brian O., compiler. "Woody Plants in the University of Washington Arboretum, Washington Park." Seattle: 1977.

Mulligan, Brian O. "A Rare Maple in the Arboretum, Acer tegmentosum." University of Washington Arboretum Bulletin. Winter 1981, 44:4, pp. 14-16.

Scottish Rock Garden Club, editors. "George Forrest." Edinburgh: 1935.

Seattle Post-Intelligencer. May 9, 1984. "Joseph Witt, arboretum benefactor."

Tukey, Harold. News release. May 29, 1984. University Week. Jan 11, 1996. "Service set to remember arborist Mulligan."

Witt, J. A. Mahonia 'Arthur Menzies.' University of Washington Arboretum Bulletin. Spring 1967, 30:1, pp. 14-15.

WELLS MEDINA
NURSERY

Where Gardeners Grow

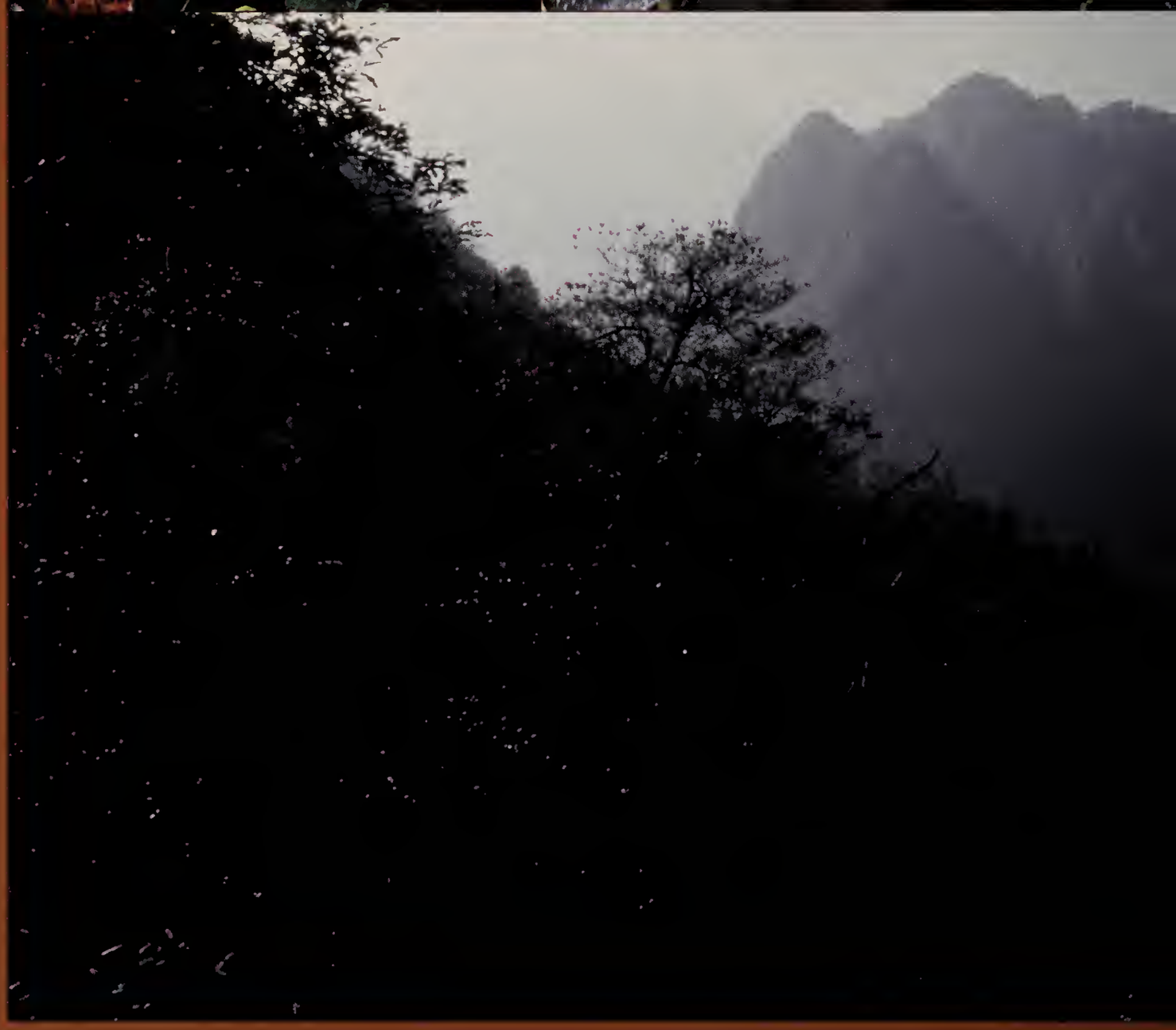
5 Acres of Superior Quality Plants

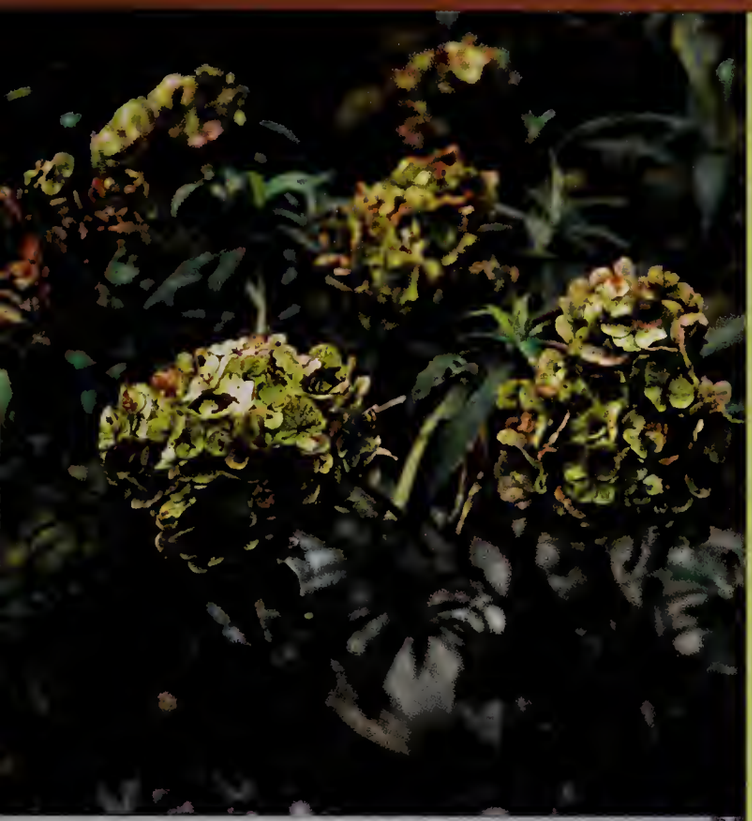
Perennials • Annuals • Shrubs • Roses
Rhododendrons • Japanese Maples

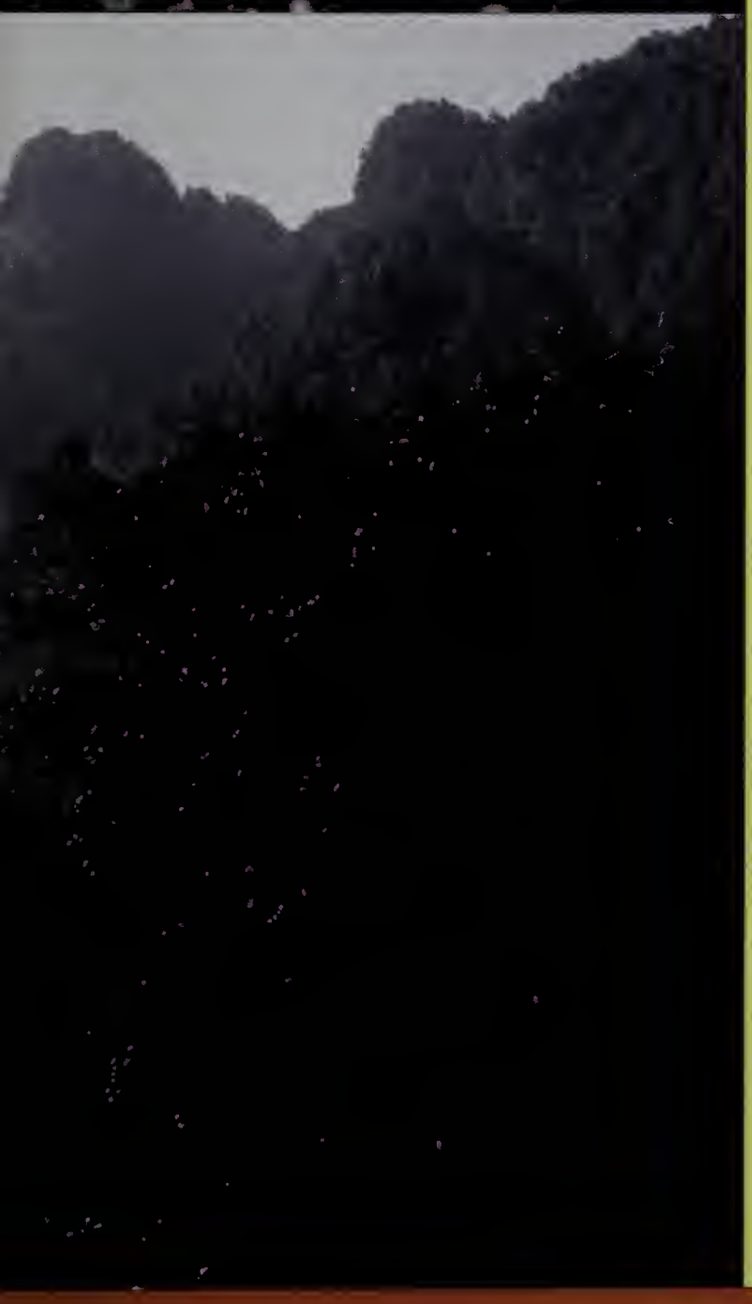
Reference Library • Knowledgeable Staff • Display Gardens
Demonstration Containers

425.454.1853

8300 NE 24th Street • Just off 520 in Medina, WA







An Improbable Jewel

TEXT & PHOTOS
BY DANIEL J. HINKLEY

About 100 miles southwest of Chengdu, the capital of Sichuan Province in China, my companions and I stop briefly on the road we are traveling and pile out of our bus to catch, on this trip at least, our first glimpse of a now-fabled mountain. In the western sky, just before sunset, there rises from the vast Chengdu Plain a rather awkward and graceless massif. At a north latitude of 29 degrees 28 minutes, equivalent roughly to the latitude of Tampa, Florida, Emei Shan is part and parcel of the Hengduan Mountains, a seemingly impenetrable range of lofty peaks and savagely deep valleys that vanguard the Tibetan Plateau from China proper. Indeed, the literal translation of Hengduan is "Cut Across," illuminating the ancient perception of this geological blockade to east/west travel.

Emei Shan: Holy to Buddhists

Although the mountain has no discernible peak or permanent snow-pack, we excitedly spy this lumpy mass of limestone rising to 10,167 feet, knowing full well it is considered "altitudinally challenged" by planetary standards, especially so when compared to

---

Images from Emei Shan:
TOP, from left to right: *Epimedium* x *omeiense*, *Clematis repens* and *Hydrangea aspera* ssp. *strigosa* 'Elegant Sound Pavilion.'
BOTTOM: Emei Shan.

sister peaks slightly to the west that rise skyward a further mile or more. But from our vantage point on the pancake plains that spread eastward from its base, Emei Shan seems larger. And perhaps because of its clunky physique—thought to resemble a headless, crouching tiger—this mountain long ago became one of the most sacred Buddhist sites within China.

For centuries, Buddhist pilgrims from all of Asia have sojourned to Emei Shan's base, where they then begin a three-day ordeal up the so-called Pilgrim's Path, arriving after 22,000 steps to the Golden Summit. Under certain weather patterns and refracted light, the clouds cloaking the lower slopes provide the illusion of Buddha's eye, inspiring the devout, arriving breathless in centuries past, to cast themselves from the 3,000-foot precipice to certain enlightenment. This suicidal practice was outlawed in the middle years of the last century.

Exactly when and how Emei Shan was ordained such a holy site has become muddled over time. With two-thirds of China's 9.6 million square kilometers comprising mountains and hills, there certainly existed no shortages of candidates. But standing beside the road, as the sun sets behind the mountain, the naïve horticulturist in each of us would like to think Emei Shan's holiness is due to the opulence of its botanical inventory.

A *Locus Classicus:* Holy to Horticulturists

Whereas the flora of the entirety of China is rich—its frosty alpine to purely tropical biomes support some 30,000 species of higher plants, representing 300 plant families and 3,000 genera—Emei Shan is, indeed, in the observations of Peter Wharton, curator of the David C. Lamm Asian Garden at the University of British Columbia Botanical Garden, a *locus classicus*. On this one mountain alone grow over 3,000 species of higher plants, not including an astounding portfolio of ferns, mosses and lichens. (By comparison, the entire climatically varied state of Washington is home to fewer than 2500 species.)

LEFT: A fall-blooming evergreen, *Mahonia confusa* is hardy to Zone 7 and is an easily cultivated garden plant.
RIGHT: Ancient bridges and trails interconnect temples and monasteries throughout Emei Shan.

Because of its sharply rising geography, from near sub-tropics at its base to a temperate flora at its upper heights, Emei Shan clearly expresses the delineations of elevation imposed upon a flora, revealing a remarkably transmuting combination of plants minute-by-minute, especially if one chooses the comfort of a bus ride to the top rather than the traditional mode of step-by-step.

Out the window, on this bus, the Zone 8 gardeners sharing the seats in front of me are staring somewhat ambivalently at the blur of green, as we switchback up the mountain's spine. Someone notes—correctly so—that the forests of broad-leaved evergreen trees are primarily those of the laurel family, but the understory remains a leafy, black-green concoction of scant familiarity to my fellow travelers. Others note the cultural landscape grandfathered into this national park: tidy family farms, with potatoes dug and chili peppers and corn hung and drying under the eaves.

When we reach about 5500 feet, however, the keen horticulturists aboard begin to sit up and take notice, with, at first, a single, excited shout, "Isn't that. . . ?" thrown to no one in particular, and then, in response, a cacophony

of Latin, like all the notes in a single symphony being played simultaneously without regard to tempo or harmony. Having personally visited the mountain on three occasions prior to this trip, I only nod and smile at this outcry, since I know that as we gain altitude, this arousal will, soon enough, morph into something even more cacophonous.

This reaction to the richness of Emei Shan's flora is predictable behavior, so noted by a long line of celebrated plant explorers and botanists who have come under this mountain's allure.

Perhaps best known of the lot is Ernest 'Chinese' Wilson, who was then under commission by Veitch's nursery in England to procure new plant material for the European trade. (Interestingly, slightly to the north and west of Emei Shan is the location where he so famously broke his leg in a landslide while collecting *Lilium regale*.) Wilson botanized on Emei Shan four times—his first visit in 1903—and this mountain alone provided a significant amount of the material he ultimately introduced into cultivation.

Pacific Connections Garden Template

It would not come as a complete surprise, then, to have this single mountain nominated as a template for the installation of the Chinese phytogeographical exhibit in the Pacific Connections Garden project at Washington Park Arboretum. It is indeed infrequent that, from one locale, the quintessential flavor of an entire region can be achieved.

With that said, it should be noted that Emei Shan does not mirror the edaphic (soil conditions) or climatic conditions of the Pacific Northwest. The substrate, as noted above, is primarily limestone and alkaline, while the 76 inches of annual precipitation fall during the summer months, with January being the driest of the year.

Yet plants are malleable creatures. Of the numerous sites I have visited, and from which I've collected seed to establish in my garden and the gardens of others, the plants of western Sichaun Province have proven to be amongst the most adaptable to the Pacific Northwest. And that is precisely what I will say to my bus full of botanical comrades—despite the fact they are too excited to listen—as we round yet another bend to reveal another cache of species yet unseen.

The Plants

Hydrangea aspera ssp. *strigosa* is the first of the hydrangeas we see, still in blossom as late as early October. Along the roadside, its flowers are intermingled with those of *Stachyurus chinensis*, a deciduous shrub whose axillary racemes of flower buds will not appear for another three months. It is one of six *Stachyurus* species known to exist on this one single mountain. In 1998, during my second trip to Emei, I happened upon *Stachyurus salicifolia*, an evergreen or partially deciduous member of this genus that I regard as one of the most handsome of *Stachyurus* species and most gratifying species I have thus far collected. Its elegant narrow, long leaves appear very bamboo-like from a distance.

At lower elevations, too, we notice the foliage of *Disporum cantoniense*, an evergreen species of fairybells that will, in autumn, display handsome crops of glistening blue-black fruit. Along the road cuts, particularly where moisture is present, at least four species of *Epimedium* display their evergreen foliage and, in spring, sprays of flowers that rise above. *Epimedium* x *omeiense* is considered a naturally occurring hybrid of this locale, where *E. acuminatum* and *E. fangii*, its parents, grow in proximity.

As we near the 6500-foot zone, the overstory of trees begins to pass from evergreen oaks and *Lithocarpus* to a blend of deciduous trees and conifers. Most notably, three of the "ancients" appear, growing side by side. *Tetracentron sinense, Cercidiphyllum japonicum* var. *sinense* and *Euptelea*

continues on page 33

The Healing Power of Plants

By Timothy Walker

At the height of the bird flu scare in October 2005, a London newspaper headlined the fact that a plant could provide the only treatment for the flu's symptoms. The plant, star anise

or *Illicium verum*, produces shikimic acid that is the starting point in the synthesis of Tamiflu, the mostly used drug against the flu symptoms. One kilogram of seeds is required to produce, eventually,

14 treatments. To the editor of this newspaper, this was obviously a remarkable story worthy of the front page—but why? The simple answer is that the majority of citizens of Western—"developed"—countries have lost touch with the concept of plants as drug providers, yet 25 percent of the drugs prescribed by the United Kingdom (UK) National Health Service today contain active ingredients produced in a plant. A further 25 percent contain active ingredients that were originally extracted from plants but are now produced artificially. So plant-derived treatments are not used solely by New-Age hippies. In fact, plant-derived treatments are neither alternative nor complementary. Plant-derived treatments lie right at the core of modern clinical medicine. Worldwide, 80 percent of primary health care is based on plant-derived treatments.

A Physic Garden and the Story of *Taxus baccata*: English Yew

The University of Oxford Botanic Garden was founded in 1621 as a physic garden, to support the teaching of medicine by cultivating the plants used by 17th century herbalists. This physic garden enabled physicians to collect and thus prescribe the correct herbs. The original design of the Garden consisted of the square walled garden subdivided into four quarters, each of which was surrounded by a hedge of English yew (*Taxus baccata*). The paths that led to the centre of the Garden began and ended with a pair of yew trees. These hedges and trees were not part of the medicinal collection but served simply to

LEFT: The English yew, *Taxus baccata*, in winter fruit. It may be viewed in the Arboretum at grid coordinates 10-3E, 31-4W and 45-3E.

ABOVE: This English yew (*Taxus baccata*) is the oldest tree in the University of Oxford Botanic Garden, the oldest botanic garden in Great Britain.

provide the symmetry seen as essential in a 17th century garden.

One of the yew trees planted by Jacob Bobart, the Garden's first *Horti Praefectus* (or director), has survived from these original plantings. It is a male tree at the south end of the central north-south axis. Its female companion fell over on January 2, 1976. We did not replace her for two reasons: First, her demise cleared a good view of the magnificent Bell Tower of Magdalen College; and second, her replacement would always have looked like a young female paired with an old male—slightly unseemly. The male tree spent more than three-and-a-half centuries as a male, but in 2000, he got in touch with his femininity, underwent gender re-alignment and produced some ovaries from which seeds developed. Thus, we now have seedlings from our ancestral plant. This relaxed attitude toward sexual orientation is referred to technically and rather too graphically as "leaky-sexuality." Such change is not uncommon in flowering plants but is rarer in conifers.

It is highly appropriate that the oldest tree in the oldest botanic garden in the UK is an English yew. First, it is one of our native tree species, and there are only 27 species of trees native to Britain. Rather more importantly, English yew leaves currently provide the only sustainable supply of baccatin III, the starting point in the synthesis of Taxol® and Taxotere®, treatments for ovarian and breast cancer respectively. The discovery of these chemotherapies is a long story, but it illustrates many of the issues surrounding the use of plants in medicine.

Taxus brevifolia, the Pacific Yew, and Taxol

In the 1960s the United States National Cancer Institute (NCI), under the leadership of Jonathan Hartwell, began to search for new chemotherapies. Hartwell and his team looked, in particular, at the plants used by native North Americans before the invasion by Europeans. In one of these plants, the Pacific yew tree, *Taxus brevifolia*, they found a number of novel compounds including one they named "taxol" for the tree's genus. Further study revealed that taxol showed great promise in the treatment of ovarian cancer in mice. At this point, clinical development of taxol was taken up by the pharmaceutical industry.

Attempts were made to synthesize taxol from scratch, but this outcome proved elusive for many years. The only supply of taxol seemed to be the bark of trees in the majestic forests of the Pacific Northwest. To treat one patient, all the bark of at least one mature tree—and often up to three trees—was needed. Although there were a lot of trees available in the 1960s, even this supply was never going to produce sufficient taxol. Removing the bark has a serious effect on a tree's life expectancy. Furthermore, the removal of these trees was damaging to the woodlands around them. Given the demand, it was clear that the use of bark from forests would never provide a sustainable supply of taxol.

The European Chapter in the Story

In France, research began on the commercial production of taxol. Applications were made for bark from the United States, but these requests were declined on the basis that American trees belong to America. While plantations of yew trees might provide taxol in the future, the use of plantations was not going to be a viable supply, either in the sort term, or for the foreseeable future. So the Europeans went down the well-tried route of developing a production system. First, they tried to order taxol from their chemical suppliers, but no one was able to supply it. Second, they also attempted to synthesize it from scratch, but they encountered the same problems the NCI scientists had discovered. (A synthetic pathway has now been elucidated, but it takes 47 enzymatically driven stages and is very expensive.)

The third option tried was to use geneti-

cally modified yeast. Yeast is very relaxed about whose genes it expresses, so if the genes for the synthesis of taxol are put into a yeast cell, it can transcribe them and make taxol. This technique is used commercially to produce insulin. Sadly, in this case, yeast did not work, and all the researchers got was a large vat of Marmite. The next possibility was to grow just the bark. (Plant cells are so much more obliging than animal cells.) Again the researchers were disappointed, for the pile of bark produced contained no taxol. But this realization did suggest that the synthetic pathway did not just happen in the bark; it started elsewhere. It was therefore possible that a chemical similar to taxol, near the end of the pathway, existed inside a part of the plant that could be harvested each year, such as the leaves or the fruit.

So the research group studied not only plants of *Taxus brevifolia* but also the other 14 species of yew, and, lo and behold, in the leaves of *Taxus baccata* they found baccatin III. This was especially fortuitous since the yew hedges in Britain and Europe were and are a ready-made production system for leaves, and it is "relatively" simple to make taxol from baccatin III. Furthermore, other similar chemicals—including taxotere, which is used in the treatment of breast cancer—have also been derived from baccatin III. Four women whom I knew at University a quarter of a century ago are now in remission from breast cancer after having been treated with taxotere.

The Importance of Conserving Plants

This story raises a number of important issues connected with the role of plants in medicine and all other aspects of our lives. First, it shows that new plant-derived treatments are still being discovered. However, we believe that one in eight plant species will be extinct in 50 years, if nothing is done to protect them. Of course, a great deal is being done to prevent this destruction, and, already, one-third of threatened species are safe in botanic gardens and arboreta. When one is designing conservation programs, it is tempting to concentrate on those plants from which we already derive helpful products; but this approach is shortsighted, for we have no idea which plants we shall need in the future. When Jacob Bobart planted our yew tree in 1645, he was using it as an ornamental, structural plant—one of very few non-medicinal plants in the collection. It has taken 15 generations for us to discover a medicinal use for the plant. It is impossible to predict which plants will become equally useful in another 15 generations' time, so all plant species should be protected.

Second, there is the question of how much of the world's biomass we should permit ourselves to use. The simple answer is that we should not consume biological resources at a faster rate than they can be restored by the photosynthetic activities of plants. There is no biological credit card, and there is no M-class planet in the Gamma-Quadrant to which we can escape or from which we can harvest plants to fulfil our needs! The extraction of bark from yew trees in their habitats is not acceptable in the long term. Unfortunately, in many places in the world there is another challenge to the use of plant-derived medicinal treatments. In these countries, there exists the belief that a plant loses its medical efficacy if it is cultivated in a farmer's field. In the majority of cases, this is not true. If it were true, how could poppies be grown commercially for opiate production, *Catharanthus roseus* for vincristine (used to treat some types of cancer), or *Ammi visnaga* for amiodarone, which treats heart fibrillation?—to name but three of hundreds of possible examples.

However, in a small number of cases, the plant only produces the chemical that we exploit as the result of some sort of "stress." These so-called secondary compounds will not be produced in a farmer's stress-free field. So because a few plants do not work if they are cultivated, it is assumed that none does. A research project in China is looking

at these maverick plants to discover how to stimulate the production of the secondary compounds. The amount of active ingredient that is produced can also be influenced by the growing conditions. For example, the commercial cultivation of *Catharanthus roseus* for the production of vincristine takes place in India, where the plant produces more of the chemical than it does in its native Madagascar. Research into the best way to cultivate medicinal plants is essential to reduce the pressure on populations in their native habitats. Already, species such as *Eucommia ulmoides*, used medicinally in China, have been harvested to extinction in the wild.

Third, there is the question of who owns the biological resources of a country. The United States took the view that *Taxus brevifolia* and its products are American property. This is an important point for many developing countries, for there is often an inverse relationship between biological wealth and a nation's financial resources.

Global Strategy for Plant Conservation

These three principles: that 1) all species must be protected, 2) biological resources must only be consumed at a rate that can be sustained by photosynthesis and 3) a country owns its biology and the benefit of its exploitation, are the three pillars of the Convention on Biological Diversity (CBD) that has now been ratified by all but six nations. (The list of nations that do not wish to be party to these principles can be found at http://www.biodiv.org/world/parties.asp.) In 2002 the countries that are party to the CBD took their work to another level, with the adoption of the Global Strategy for Plant Conservation. This plan was initiated by the botanic garden community and has 16 targets to be hit by 2010. Of particular relevance to plant-derived treatments are target 11, which aims to eliminate the extinction of plants as a result of international trade; target 12, which aims to have 30 percent of plant-derived products harvested from sustainable systems by 2010; and target 13, which aims to halt the loss of local knowledge relating to the use of plants. The full list of targets can be found at http://www.biodiv.org/programmes/cross-cutting/plant/targets.shtml.

Other targets are also relevant, but of overarching importance is Target 14, which aims to improve public awareness of the need to conserve plants. There can be few more powerful selling points for plant conservation than the fact that plant-derived treatments relieve suffering and save lives every minute of the day.

Of course, it is not just in the treatment of cancer that plants have a role. One of the less glamorous but more important duties of the *Horti Praefectus Oxoniensis* is to close the Glasshouse vents in the evening. Sometimes my three young children come to "help." Recently, Noah (age 5) fell over, grazing his knee. Off we went to the Arid House, where we carefully removed a small section of Aloe vera and smeared it on the wound. Before we got home, the pain was gone. The wound healed beautifully—a small but simple example of the importance of the sustainable cultivation of a medicinal plant.

Different people have different motivations for conserving plants and our biological heritage, but no father can look into his children's eyes and say he does not care about their future. Their future depends on our ability to live in our biological habitat and exploit it at a biologically sustainable rate. ~

Timothy Walker is the *Horti Praefectus* (Director) of the University of Oxford Botanic Garden. To read his article on the early years of the University of Oxford Botanic Garden, see the Summer 2004 issue of the Bulletin.

A Decade of Deb

By Steve Lorton

Deb at home in her garden

Tall and willowy, beautiful, spirited and always impeccably turned-out, Deb Andrews was the administrative, and some would say spiritual, anchor for Arboretum Foundation members for nearly ten years.

On December 1, 2006, Andrews left the Foundation—in her official, executive director capacity—to return, it is roundly hoped, as a volunteer. And that's just where she started.

Over lunch at Café Flora, Deb pushed her fork gingerly into a half order of polenta. "It couldn't be a lovelier ending," she said, with a detectably wistful appreciation of the moment. "I started as a plant sale volunteer. My last day will be spent at the members' party for Greens Galore."

The Perfect Place to Settle

Andrews wandered into the Arboretum in the early 1990s, shortly after she and Jim, her husband of 22 years, moved to Seattle from Saudi Arabia, where they had lived for five-and-a-half years. "We left Arabia and were looking for the perfect place to settle. Seattle was it. We bought a house with some land around it. I didn't know a thing about plants. My friend Rosina McIvor led me to the Arboretum."

In no time, Deb was an energetic and much-loved volunteer. That led to an invitation to be on the Board of Directors; then came a vice presidency. It was a heady time. The Foundation was trying to put its Master Plan in place, and Board President Duane Kelly knew that the Foundation and the plan needed a full-time professional advocate to launch this ambitious project.

Ask Kelly about Andrews, and the normally direct and concise impresario of the Northwest Flower & Garden Show gets enthusiastically long-winded. "I was always impressed with her passion and managerial skills," says Kelly. "She's solid, hardworking, organized. She's a wonderful human being. She could not have been better. I adore her."

An impressive assessment, to say the least, but Kelly keeps going, "She can hang in during tough times politically and financially. Every two years a president and a board change. Deb was the glue that held it all together."

Foundation Glue, Ringmaster, Cheerleader. . .

The term "Foundation glue" works well. One might also say ringmaster, cheerleader, coach, nurse, high priestess and keeper-of-all-confidences. Her work week rarely held to the forty hours she was paid for, often extending to fifty, sometimes eighty. She was in the office by 7 or 8 a.m., rarely out by 6 p.m. She sat in on meetings, met with potential donors, talked plants with one visitor after another as they passed through, never missing an opportunity to reach out to the greater community on behalf of the Arboretum.

Helping to create the Foundation's display garden at the Northwest Flower & Garden Show, she'd be ordered to stop sweeping and get off the floor three minutes before the judges showed up. Then, miraculously, a few hours later, she'd appear, Diored and bejeweled at the Foundation's preview party, welcoming patrons as they glided through the

doors. She was. . . she is. . . radiant.

Looking back on it all, Andrews says one of the most exhilarating times was the arduous—and, for many of us, frustrating—period of getting the Master Plan approved. With characteristic diplomacy she says, "There was extreme public interest and input. Passions ran high. But it became a matter of taking all that input and learning about the audience of the Arboretum. It was a great learning experience. We learned about the diversity of interests that drive the Arboretum. Although it took forever and was difficult. . .," she pauses, "very difficult, the end result that we came out with would not have been as good without all that went into the process of getting the plan through."

BRENDA CHRYSTIE

Deb Andrews presenting the 2006 Arboretum Foundation annual Legacy Award to Nancy Davidson Short.

How did she feel when an anonymous donor recently gave the Foundation a million dollars? "It was like Christmas, of course. But there were many days like Christmas. Someone would come in having seen a planting or read an article, and they'd give $100, maybe $25, which could seem like a million to them. Seeing the generosity of people is touching and energizing."

Savoring Subtle Joys

But as exciting as those times were, Andrews counts the quiet pleasures as the most important. "The most wonderful thing has been watching the organization grow: the volunteers, the board, the staff, the membership. Renewals would come in from people who'd been members since the 1940s. When Jeanine Curry passed away, she had a tree, a *Clerodendrum trichotomum*, which she wanted the Arboretum to have. Her family made it happen. It was moved and planted at the north end of the parking lot. It's the first thing I look at when I drive in every day. It's always doing something different, something beautiful. I'm reminded of Jeanine."

Perhaps it is this very attention to detail and the ability to savor subtle joys that is most appealing and remarkable about Deb. Asked what her single favorite thing about the Arboretum is, she dodges the question with the skill of a politician and the caginess of a loving mother of twelve. "All of it: the eagle, when she appears; the hummingbird, who comes up to my window and seems to want to get in; walks through the Woodland Garden; the promise of the Pacific Connections Garden, just now getting going at the south entrance. You know, for years I'd escort patrons at plant sales to the cashier's table. They'd line up and I'd ask them about their purchases and talk to them so they wouldn't feel impatient. The enthusiasm, the excitement, the commitment was a wonderful thing. I loved those moments."

So why did she leave? "It's time. Many great things have happened, and now I sense that there is something more, something different out there. I'm just ready to start a new phase of my life. I don't know quite what that is, but I know it's coming, and to get the process moving requires change. And I've always welcomed change in my life. I'm not afraid of it."

Hearing this provokes a sense of anxiety, a fear of loss in Deb's fans. Will we see her again? Is she off to Bombay or Buenos Aires? She picks up on this, intuitively.

"I expect to be around," she says with a wink. "No doubt I'll be volunteering at the next plant sale."

Oh, how we all hope so. And thank you, Deb. ~

Former Northwest Bureau Chief of *Sunset Magazine*, **Steve Lorton** continues to write and lecture and passionately support the Arboretum. He may be reached at Stevelorton@aol.com.

How Could an Arboretum Not Have an Arborist?

By Lou Stubecki

LOU STUBECKI

Darrin Hedberg removing a storm-damaged Kentucky coffee tree (*Gymnocladus dioicus*).

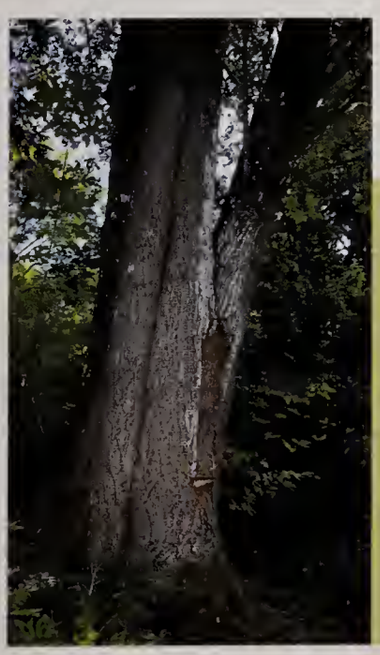
DARRIN HEDBERG

Lou Stubecki pruning a bigleaf (Oregon) maple (*Acer macrophyllum*).

We are now beginning the 15th year of Washington Park Arboretum's arboriculture program. It began in late 1990 after a devastating snowstorm caused widespread damage. The need for a staff arborist was clearly evident. As a result, the Arboretum Foundation contributed the funds needed to hire an International Society of Arboriculture (ISA) certified arborist for three years.

Fortunately, at that time, I was volunteering through Davey Tree to clean up snowstorm damage in the Arboretum. David Zuckerman informed me of the new position, and I immediately realized that this opportunity offered the chance to work in a botanic garden of great significance, to learn at work, every day, and to watch plants develop over the years. I managed to get the job and also, over the years, to convince everyone three years was not enough. After all, how could an arboretum not have an arborist? Even without the snowstorm, hazard trees were accumulating, specimens were being neglected, and new trees were going untrained.

LOU STUBECKI



In the Beginning

In the beginning, my job was mostly triage and catch-up. By creating a hazard tree management program and an effective tree-work priority

This multi-trunked big leaf (or Oregon) maple (*Acer macrophyllum*) is located on the sumac hillside in the Arboretum's Woodland Garden. In 1994 I noticed a trunk union with failure potential at the tree's base. We cabled the trunks together to abate the hazard and have continued to monitor the tree. In recent years, a large fruiting body of a wood decay fungus, *Ganoderma applanatum*, has developed at the suspect trunk union. This fruiting body can significantly compromise the tree's trunk union beyond the strength of the cable. The tree's upper canopy has been shredded by recent windstorms, as well. As a result, this tree has now moved up to number-one priority for hazard tree removal.

list, I was able to start dictating the work to be done instead of having the work always dictated by circumstances. Most of the time, I was assisted by a revolving cast of untrained staff. But in 2003 Darrin Hedberg was hired to be my permanent assistant. Since then, Darrin has become an integral part of arboriculture at the Arboretum. We also receive help from the Seattle Parks and Recreation tree crew. On occasion, they assist us on Lake Washington Boulevard, when we do not have sufficient equipment, staff and flagging to complete major work.

Hazard Tree Maintainence

Hazard tree management is a large part of the arboriculture program. It begins with routine and random searches for trees at risk. The highest target areas (where the greatest loss of plant life or property may occur) are perused more often. Trees that are suspect for possible failure are evaluated in great detail, if necessary. This evaluation may involve probing the trunk and the root zone or climbing to inspect the canopy. The results are documented, and trees are rated to fit into our hazard tree priority list. Hazard abatement may require tree removal, cabling or pruning. After abatement, cabled and pruned trees continue to be monitored. In fact, some trees are monitored over a period of years. If a hazard tree needs to be removed, I decide if we need to hire contractors or whether we can perform the job with our own crew. If a removal requires more equipment and trained staff than we have, then we hire and supervise outside contractors.

Collection Maintenance

Collection maintenance is another significant part of arboriculture at the Arboretum. It also happens to be my favorite part of the job. Priorities are determined by what is seen in the field and by objectives passed on by the Curation Committee. Regular communication helps: We turn condition reports into the Curation Committee, and they respond with a recommended course of action. Over the last 15 years, I have developed an intimate knowledge of the collection. This experience helps us monitor the collection thoroughly and regularly allows us to take the pulse of its most-valued members.

The primary tasks of collection maintenance include pruning, removal, root-zone enhancement and structural training. Sometimes interactions between Arboretum specimens and the native matrix require performing these tasks on native trees as well, since native trees occasionally have a negative impact on valuable collections. Examples of this impact can be seen in our pinetum and in the oak collection, where we had to take out many large native trees, thus allowing the remaining specimens room and resources for better development.

The native tree matrix can also have a beneficial influence on collections throughout the Arboretum, as can be seen in Rhododendron Glen. Here, the large natives provide enough shade to prevent rhododendrons from being scorched. Balancing the needs of native plants and Arboretum collections can be challenging, but we never forget the importance of our native matrix in the Arboretum's development.

Pruning has to be performed carefully and at the right time of year. Late winter or early spring is best for maintaining plant vigor, and mid- to late summer is best for controlling watersprouts. Fall is the worst time of year for pruning, for the wounds that are made seal slowly, and there are more decay fungi spores in the air.

We also have to take into account insect and disease issues. For example, we used to prune cherries in July and August, but those months happen to be the peak time for cherry bark tortrix adult emergence and egg laying. (See Todd Murray's article in the Summer 2006 Bulletin.) Adults find fresh pruning wounds attractive for laying eggs; therefore, we now prune cherries in September. The ISA provides the scientific information and ongoing training that we use to increase the precision and effectiveness of our pruning. We even take care to

use cambium savers for our climbing ropes, so they don't burn the bark and cambium.

Root-zone enhancements help improve growing conditions in our weary soils, which suffer from a multitude of problems including compaction, lack of organic matter, lack of mineral nutrients and poor drainage. But sometimes lack of equipment limits what we can accomplish. We can add compost and mulch on the surface but lack the necessary equipment to perform root-zone enhancements for greater effectiveness. We have an air spade for breaking up compaction but have to rent a compressor to run it. We could also inject more fertilizers, mycorrhizae and bio-supplements but have only an antiquated hydraulic sprayer.

Collection maintenance would not be complete without the structural training of new trees. Through pruning, staking, and other manipulation, a structure is developed that is appropriate for the tree's ultimate size and form. This is valuable in reducing future maintenance and tree hazards.

Emergency Work

One of the unfortunate, yet inevitable, components of the arboriculture program is emergency tree work. Emergencies can require the pruning or removal of trees in response to storm events or vandalism and unexpected tree failures. As can be imagined, emergency tree work can be very dangerous. When climbing half-fallen trees or cutting up trees that are under tension, it is important to be aware of changes in tree positioning and to put safety before speed.

Of course there are many other components to the Arboretum's arboriculture program. Continuing education is essential for all arborists. And the opportunity for public outreach is one of the program's most rewarding gifts. Teaching comes naturally, and we often find ourselves showing visitors signs of decay in just-removed hazardous trees or pointing out plants of uncommon beauty. I also formally teach University of Washington Botanic Gardens (UWBG) public outreach and academic classes in pruning and hazard tree assessment and assist with larger projects, such as the Pacific Connections Garden and the appraisal of trees for the proposed Highway 520 expansion.

The Arboretum arboriculture program has come a long way in 15 years, but we still have a long way to go. We "get by" on so little staffing and resources because of our determination and love for the Arboretum, but to do our best, we need more staff and equipment, as well as salaries comparable to those of similar fine arboreta. With these improvements, we could achieve our goal to create an arboriculture program that is on par with, or even better than, programs in other respected public gardens around the world. That's all we want!

Lou Stubecki has been the Arboretum's arborist since 1991. He also serves as arborist for UWBG. Lou may be contacted at loustu@u.washington.edu.

DIG
Floral & Garden
19028 Vashon Hwy SW
Vashon, WA 98070

206-463-5096
206-463-4048 fax
web: dignursery.com
email: dig@centurytel.net

LUCCA STATUARY
European Garden Ornaments, Ltd

THE NW'S LARGEST SELECTION OF CAST STONE FOUNTAINS, PLANTERS, BENCHES & GARDEN ORNAMENTS. REASONABLE PRICES, HEIRLOOM QUALITY.

3623 LEARY WAY NW • SEATTLE, WA 98107
STORE 206.789.8444 • 10-6 M-SAT, 11-5 SUN
WWW.LUCCASTATUARY.COM

New—for Daphne Lovers

By Jerry Flintoff

A sure sign of infectious and white-hot enthusiasm bursts forth with the formation of a specialist plant society. The Daphne Society, founded a few years ago, meets this need for daphne enthusiasts by regularly publishing newsletters full of information for daphne devotees. Although excellent for its time, the small book on daphnes by Christopher Brickell and Brian Mathew, "Daphne: The Genus in the Wild and in Cultivation" (1976), poorly addresses the needs of today's inquiring plantsman. Published in 2001, the botanical monograph by Josef Halda, with its lovely paintings by Jarmila Haldová, Halda's spouse, is of limited usefulness for the general gardener, and his naming of some of the plants remains controversial.

Now, to stoke current enthusiasm, comes a new and attractive book by Robin White—owner, with his wife Sue, of Blackstone Nursery, the Mecca of new and outstanding choice plants in Kilmeston, Hampshire, England—that offers information on nearly all of the species and cultivars known in cultivation. "Daphnes: A Practical Guide for Gardeners" includes every species desirable, except for the ones sought after by the must-have-every-species collector.

The core of the book consists of descrip-

tions of plants with notes on their origin and any peculiarities in their culture and propagation. Good descriptions of many new hybrids make this book indispensable for the daphne grower. Most descriptions include clear and excellent close-ups of the flowers that are helpful for identification. As a whole, the photos of plants growing in the garden are less useful, chiefly due to the characteristic size of each plant rather than any blurriness or photographic defects.

Daphne odora 'Aureomarginata'

Helpful Advice for Gardeners

Other topics, including cultivation, pests and diseases, propagation and use in the garden, are competently treated. White credits the all-too-frequent demise of daphnes (A remark made by that extraordinary plantsman E.B. Anderson comes to mind: "The daphne heaven must be very crowded!") as being caused by fungal pathogens. He offers advice on what to do to keep plants growing for what should be a long life: "Most of the smaller evergreen daphnes have a bushy habit which may extend to soil level; over a period of years the lowermost stems near the centre of the plant become deprived of all light and die. Dead leaves and flowers which fall and accumulate at the base of the plant provide the ideal situation for Botrytis to develop and infect the dead stems." I must try his remedies on my fourth attempt to grow *Daphne* x *burkwoodii* 'Briggs Moonlight.'

White covers the subject of grafting, often used for slow-growing smaller daphnes, in easy-to-follow directions. Grafting daphnes IS

The Berger Partnership PS
Landscape Architecture

1721 Eighth Ave. N
Seattle, WA 98109
206.325.6877

bergerpartnership.com

Edgewood Flower Farm
2017 Meridian Ave East, Edgewood, WA
(No. Hill Puyallup) (253) 927-0817
www.edgewoodflowerfarm.com

BLUESTONE
FLAGSTONE
WALL STONE
STONE BENCHES
COBBLE STONE
stone

Lakeview
Stone & Garden
Open Monday
through Saturday
In Seattle, behind
University Village
4647 UNION BAY PLACE NE (206) 525-5270
Delivery available

easy, as this klutzy and technically challenged reviewer has proved. Try it! Further, a chapter on the botanical details of daphnes and plant classification supplies easy-to-understand explanations for the general reader.

Not every bit of information that would be helpful to Northwest gardeners is included in "Daphnes." The European (including British) *Daphne laureola*, the spurge laurel, apparently does not spread aggressively in its native home, so no warning about its invasive proclivities occurs in the book. Nevertheless, D. *laureola* can be dangerously enthusiastic in the maritime Northwest. In fact, all plants of this species are being removed from Washington Park Arboretum.

One of the best reasons to grow daphnes lies in their, often, heavenly fragrance. To me, the best is that of the easily available *Daphne odora* with its fresh, never cloying, aroma comparable to the best perfumes. White writes, "This is the first daphne I ever put my nose to. After all these years I still look forward to the first flowers opening each spring to renew my acquaintance with a scent that I rate unbeatable. Due to the wonderful fragrance of the flowers, this Chinese species has been cultivated in its native land for thousands of years." Despite this volume's completeness, I was disappointed to not find mentioned one of my favorite forms of *D. odora*, a white-flowered form with cream-edged leaves—a kind and treasured gift I received some years ago from Pamela Harper.

Yellow-Flowered Species

A general range of flower color, from white through pink to purple, dominates this genus, although there exist a number of lovely yellow-flowered species. Two, the deciduous *Daphne giraldii* and the evergreen, fairly tender *D. aurantiaca*, grow in a few local gardens. The newly introduced—and probably hardier—evergreen, *D. calcicola*, also promises to be a worthy garden subject. Its photographs are ravishing. The rather strange *D. jezoensis* from northern Japan occurs even more rarely in gardens. It drops its leaves in summer and makes new growth, along with flower buds, in late summer and early autumn. "No extension growth occurs at this time, and there is little further development of the flower buds until early spring, when they produce deep yellow flowers with a delicate fragrance similar to that of freesias." Isn't that enough to incite gardeners to try it? It certainly is for me.

Undoubtedly, Robin White's "Daphnes: A Practical Guide for Gardeners" will continue to incite daphne lust in this gardener for some time to come. ~

Jerry Flintoff, who describes himself as a "lifetime" gardener, was born in Tacoma and now gardens on Vashon Island.

Bibliography

White, Robin. "Daphnes: A Practical Guide for Gardeners." Timber Press, 2006. ISBN: 9780881927528, $34.95.

Cloud Mountain Farm
Nursery, Landscaping & Orchards

Unique Plants For Northwest Gardens
ornamentals, fruit, natives
6906 Goodwin Road, Everson • (360) 966-5859
www.cloudmountainfarm.com

Select Native and Hardy Exotic Plants

Cyclamen coum
Enjoy a walk around the 4-acre Kruckeberg Botanic Garden and see how your trees and shrubs from the Nursery will look as they mature.
Open: Thurs - Sat 10AM - 5PM Or by appointment
20312 - 15th Ave. NW, Shoreline, WA 98177 ♣ 206-546-1281
www.MsKNursery.com
MsK Rare Plant Nursery

An Improbable Jewel

Continued from page 19

pleiosperma, all possess an archaic vascular system comprised, as with the gymnosperms, entirely of tracheid xylem cells. The leaves of the *Tetracentron* and *Cercidiphyllum* (katsura) appear confusingly similar to us until we stop to examine them more closely and observe that the former has foliage alternately arranged, while that of the Katsura is oppositely held along the branches.

Through these trees thrives an entanglement of vines and lliana. The bold leaves of a grape, a *Vitis* species, add a dash of orange-red autumn color to the softly textured foliage of *Pinus armandii*, a five-needle pine similar in appearance to our native *Pinus monticola*. The variegated leaves of *Actinidia kolomikta* and *A. polygama*, two kiwis, add a late season dash of white or pink to the upper branches of trees. These two species extend across the whole of China, even into the Korean Peninsula and on to the archipelago of Japan. The bolder foliaged *Actinidia deliciosa*—from which the modern, edible kiwi was derived—is also present, sending its bristly stems high into the overstory.

At moderate elevations, we might just spot a specimen of *Davidia involucrata*, the highly regarded dove tree. Though admired for its floating flurry of large, white-bracted flowers in June, I find the lore surrounding its chase and ultimate "capture" to be its finest association. Wilson, himself, was in on the chase for his employer, competing with the French to be the first to bring this beguiling species into cultivation. Though the trophy ultimately went to the other team, Wilson is noted as being the first to photograph it in the wild—while standing precariously on a limb of *Tetracentron sinense* that grew nearby.

Slightly lower in elevation, if one looks down upon the canopy from one of the many viewpoints proffered by this mountain, one might see the large flowering heads and bold ovate leaves of *Emmenopterys henryi* (Rubiaceae), a deciduous tree that Wilson described as one of the most beautiful deciduous flowering trees in China. Notoriously slow to come to flowering age in cultivation, the first specimens have just begun blossoming in North America within the last decade. The flowers of this tree are surrounded by large white bracts, appearing not dissimilar to a white poinsettia.

Near the Top of the Mountain

The bus we are on finally reaches level ground, and we find ourselves at 9500 feet and in a dense and cold fog. But even through this cloud we can see the diversity of plants around us, and it is staggering. *Sorbus sargentiana* shines with large clusters of orange-red fruit, while a more demure species, *S. setschwanensis*, rising only to eight feet, glistens with white fruit. *Hydrangea anomala* climbs high on the trunks of *Abies densa*, while the papery tufts of seed from *Dipelta*, a large deciduous shrub (Caprifoliaceae) related to the more commonly cultivated *Kolkwitzia*, appears, through the grayness, to be in full flower.

There is a discernible excitement to this mountain, and to walk its flanks necessitates delectable, if somewhat exhausting, conversation as one canvases the mind, attempting to decipher and extract names of plants once known or, perhaps, never before seen. It is this emotional overload that I expect from my comrades, as, at last, we regroup and drive down the mountain to our quarters for the night. But I listen, instead, to the quiet of amazement. ❧

Garden designer and writer, as well as plant hunter, **Dan Hinkley** travels the world in search of seed and the excitement of finding new garden-worthy plants. To read more about the Arboretum's new Pacific Connections Garden, see David Mabberley's article in the Fall 2006 issue of the Bulletin.

Molbak's®

Everything gardening.

Inspiring Gardeners Year-round
with a Distinctive Selection of...

- Trees
- Perennials
- Groundcovers
- Shrubs
- Annuals
- Vines

Free Horticultural Seminars
and Special Events

Woodinville • 13625 NE 175th Street • www.molbaks.com • 425-483-5000 • 1-866-466-5225

Arboretum Foundation

Washington Park Arboretum
2300 Arboretum Drive East
Seattle WA 98112-2300
www.arboretumfoundation.org

NONPROFIT ORG.
US POSTAGE
PAID
SEATTLE, WA
PERMIT NO. 126

**An arboretum
is a living museum
of woody plants
for research,
education, conservation
and display.**

**********AUTO**3-DIGIT 980
Bradley Colman
11325 207th Ave SE
Issaquah WA 98027-8552